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Statement of  
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Deputy Administrator  
National Aeronautics and Space Administration

before the  
Committee on Aeronautical and Space Sciences  
United States Senate

Mr. Chairman and Members of the Committee:

I should like to introduce the discussion this afternoon by summarizing our policy on the review of accidents, by highlighting the events that have taken place since the occurrence of the accident on January 27, by outlining the procedures and actions of the Apollo 204 Review Board, and by laying out the approach we are taking in integrating the findings of the Board and the recommendations of the Apollo program office into a pattern of decisions for the on-going program.

It is NASA policy to conduct thorough and detailed investigations of any serious accident or failure. This applies to our extensive program of ground testing as well as to flight operations -- to aeronautical as well as space activities. We have established especially strict investigative and reporting procedures covering incidents of injury or death or significant damage to facilities or equipment. In certain cases, such as the Apollo 204 accident, the Office of the Administrator establishes a Review Board with

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broad powers and responsibilities to investigate the circumstances and to recommend corrective or other action based upon the Board's findings. As you know, it is this latter course that we have followed in the case of the Apollo 204 accident. I have available here copies of the management directive under which the present Board was established.

At the time of the Apollo accident, the majority of the NASA and Apollo senior management were meeting with the combined group of the Gemini and Apollo executives. This two-day meeting had been scheduled for January 27 and 28 to permit the senior members of the industrial organizations charged with the execution of the Apollo program to hear, first-hand, the experience, problems, and solutions that had been developed during the recently completed Gemini effort. This important management discussion continued on Saturday, January 28, although General Phillips, Dr. Gilruth, and Dr. Debus had left Friday evening for Cape Kennedy as soon as the extent of the accident became known to us in Washington.

Once at the Cape, General Phillips took a number of immediate steps: He impounded all the data possibly relevant to the accident. This included the recorded test information, the spacecraft and launch vehicle, and such other records as were known to exist. This step was taken to assure that no information would be lost, changed, or released

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After the initial meetings of the Board, it was felt that some change in membership would be appropriate. Those changes, and expanded instructions to the Chairman, were documented in a memorandum of February 3, which is also available here.

The Board is charged with the specific task of establishing the probable cause or causes of the accident. As I have noted in my recent report to Mr. Webb, which has been submitted to this Committee, the cause has not yet been found and is expected to require a detailed and painstaking evaluation of the physical evidence -- that is, of the spacecraft and its support systems. The Board is charged with reporting its findings as to the cause of the accident as expeditiously as possible; it is further charged with developing recommendations for corrective or other actions based upon its findings and determinations. The final report, which I feel will take a considerable time to prepare, will be made available to the Committee as requested in the Chairman's letters of January 31.

In order to collect the relevant information, and to conduct the appropriate analyses and tests, the Board's effort has been organized into a discrete number of tasks, each of which is to be performed by a task group made up of the appropriate government and contractor personnel. Each panel is chaired by a NASA employee who is the most knowledgeable for the task. The Board members act as panel monitors and points of contact with the Board for those panels assigned to them. In addition to the panels noted in my report to Mr. Webb, other panels are working in the areas of test procedures, witness statements, emergency procedures, and spacecraft disassembly activities. The

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Board will continue to assign new tasks to the panels as the need becomes evident.

The Board itself meets in both regular and executive session.

In the regular sessions those consultants, panel members, and program officials that are appropriate are present to present their plans and schedules for forthcoming activity and to report upon the results attained to date. These daily meetings are held in a secure area and are carefully documented since they will form the basis of the Board's final report. The Board also meets in executive session so that matters requiring guidance to the panels from the Board can be freely discussed and a responsible course of action developed, and also so that sensitive developments can be treated appropriately.

I would like to note that Col. Charles F. Strang, from the Safety Division of the Air Force Inspector General, is a full member of the Board. Col. Strang is an able and experienced officer and we are fortunate to have his talents available to us. At present, he will act for the Chairman in the event Dr. Thompson is absent.

The Bureau of Mines of the Department of the Interior has provided us another Board member -- Dr. Robert Van Dolah, an expert in explosive research and fire propagation. Together with the team he has brought together, he represents a major asset in the identification of the source of ignition and the cause of the accident.

We have assigned a Chief Legal Counsel to the Board to advise it during its deliberations.

The Eastern Test Range of the U. S. Air Force is providing many important services during the investigation. They have provided a full-time representative to the Board who is assisting in interviewing the many witnesses who may have information needed by the Board. The Board is also closely coordinated with the Air Force investigative board examining the Brooks space simulator accident. In addition, an Air Force observer associated with their manned flight effort is present at all regular meetings.

In parallel with the Board investigation and review, the NASA Manned Space Flight Program Office, headed by Dr. George Mueller, who is here today, is continuing its assigned responsibilities in the Apollo program. Under the procedures I have described, this office retains a major responsibility in the collection and analysis of accident data for use in its own assessment of the accident and the possible corrective actions that it may be required to take.

Various alternatives are reviewed for technical and operational feasibility. The Program Office is reviewing the impact of these alternatives upon schedules, budgets, and manpower requirements. This effort in no way detracts from the support being provided the Board, which has priority in terms of trained manpower or data analysis.

Alternatives that must be considered include the choice of cabin and suit atmospheres, means for improving accessibility into and out of the cabin during ground test, procedures for minimizing the possibility of fires, and approaches to extinguishing fires if they should occur. Such design and study effort are fundamental to the question of the trade-offs that must be assessed as we go forward.

As you know, a majority of this effort is carried out by the industrial team supporting Apollo. Because of the number of people involved as these alternatives are examined and developed, it is not possible to assure that they will not become known outside of the agency and may even be reported as reflecting various categories of management decisions. We are doing all we can to release appropriate data as promptly as it can be properly verified and related to the main purpose of our effort -- to understand what happened and the causes.

I wish to assure that no major decisions concerning the steps we may find it necessary to take have been made at this time. Mr. Webb, Dr. Mueller and I will not make these decisions until the findings of the Board have been reported to the Administrator and<sup>we</sup> have had time to carefully consider all factors. NASA will provide authoritative information to this Committee on any such decision prior to its announcement.

We have already advised this Committee that we are continuing with the unmanned Apollo flight program on the schedule that was prepared before the 204 Apollo accident. We will not, however, undertake another manned flight or total systems simulation until we have ascertained to the best of our ability the conditions that have led to this accident, and until we are assured that all corrective and preventive measures available to us have been adequately analyzed and evaluated, and that appropriate actions have been taken. As we have consistently maintained in the past, the safety of our astronauts is and will be a prime consideration in all we do. Both President Kennedy and President Johnson have strongly supported us in this position, instructing us to "launch when ready, but only when ready." We can assure this Committee that we will press to meet specific flight targets only when we are assured of that readiness.